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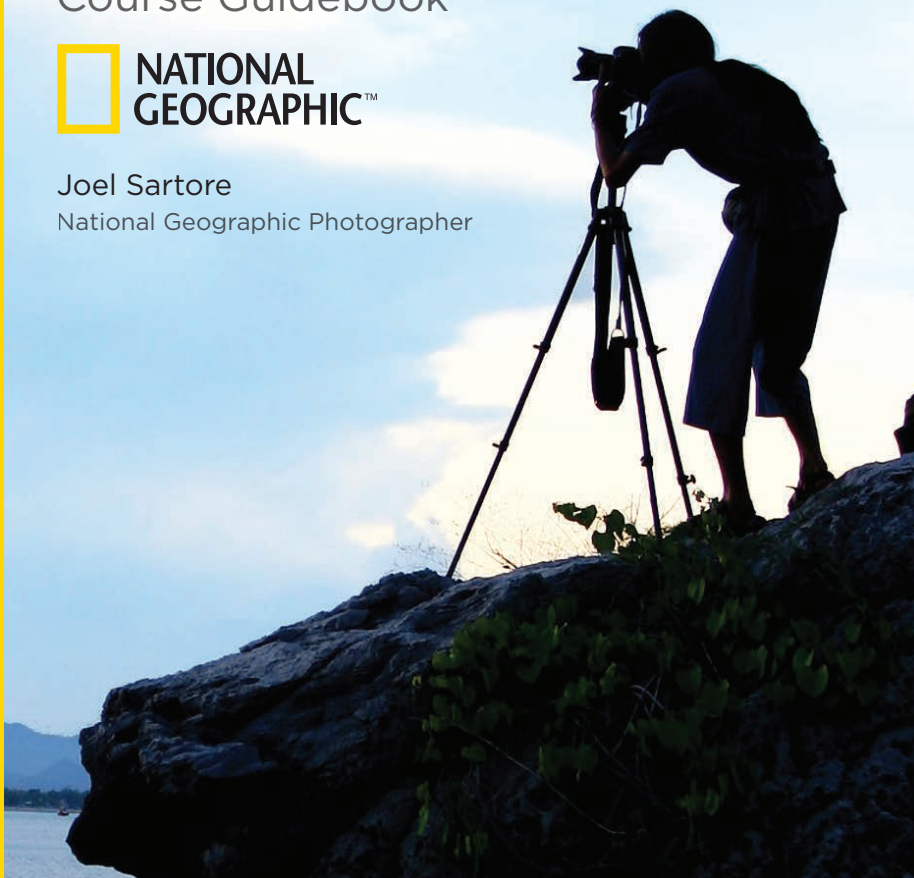
Subtopic  
Arts & Leisure

# Fundamentals of Photography II

Course Guidebook



Joel Sartore  
National Geographic Photographer



**PUBLISHED BY:**

**THE GREAT COURSES**

**Corporate Headquarters**

**4840 Westfields Boulevard, Suite 500**

**Chantilly, Virginia 20151-2299**

**Phone: 1-800-832-2412**

**Fax: 703-378-3819**

**[www.thegreatcourses.com](http://www.thegreatcourses.com)**

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## Joel Sartore

National Geographic Photographer

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**J**oel Sartore is a photographer and National Geographic Fellow, a speaker, an author, a teacher, and a regular contributor to *National Geographic* magazine. He holds a bachelor's degree in Journalism, and his work has been recognized by the National Press Photographers Association and the Pictures of the Year

International competition. The hallmarks of his professional style are a sense of humor and a midwestern work ethic.

Mr. Sartore's assignments have taken him to some of the world's most beautiful and challenging environments, from the Arctic to the Antarctic. He has traveled to all 50 states and all seven continents, photographing everything from Alaskan salmon-fishing bears to Amazonian tree frogs to bring public attention to what he calls "a world worth saving."

Mr. Sartore is the founder of the Photo Ark, a 20-year project to document every captive species on earth using studio lighting and black-and-white backgrounds. His goal is to foster public concern about the plight of endangered species and to move people to save these creatures while there's still time.

Mr. Sartore has published several books, including *RARE: Portraits of America's Endangered Species*; *Nebraska: Under a Big Red Sky*; and *Photographing Your Family: And All the Kids and Friends and Animals Who Wander through Too*. His most recent book is titled *The Photo Ark*, published by National Geographic Society.

In addition to the work he has done for National Geographic, Mr. Sartore has contributed to *Audubon* magazine, *TIME*, *LIFE*, *Newsweek*, *The New York Times*, and numerous book projects. He and his work have been the subjects of several national broadcasts, including National Geographic's *Explorer*,

NBC's *Nightly News*, NPR's *Weekend Edition*, and an hour-long PBS documentary titled *At Close Range with National Geographic*. Mr. Sartore is also a regular contributor on the *CBS Sunday Morning* show. For The Great Courses, he has taught *Fundamentals of Photography* and *The Art of Travel Photography: Six Expert Lessons* and was one of the lecturers for *National Geographic Masters of Photography*.

Mr. Sartore is always happy to return to home base from his travels around the world. He lives in Lincoln, Nebraska, with his wife, Kathy, and their three children. ■

# Table of Contents

## INTRODUCTION

Professor Biography .....	i
Course Scope .....	1

## LESSON GUIDES

### LESSON 1

Find the Picture .....	2
------------------------	---

### LESSON 2

Understanding Light .....	6
---------------------------	---

### LESSON 3

Working with Light in a Landscape .....	11
---	----

### LESSON 4

Taking Photos under and around Water .....	16
--	----

### LESSON 5

Photographing Reflections and Reflectivity .....	21
--	----

### LESSON 6

Photographing Shadows and Backlighting .....	26
--	----

### LESSON 7

Big Results from Little Lights .....	30
--------------------------------------	----

### LESSON 8

Taking Studio Lights Outdoors .....	36
-------------------------------------	----

### LESSON 9

Human Portrait Photography .....	41
----------------------------------	----

### LESSON 10

Animal Photography .....	46
--------------------------	----

<b>LESSON 11</b>	
Night Photography.....	51
<b>LESSON 12</b>	
Art Photography: Perspective and Illusions.....	56
<b>LESSON 13</b>	
Art Photography: Having Fun .....	60
<b>LESSON 14</b>	
Art Photography: Still Life .....	64
<b>LESSON 15</b>	
Black-and-White Photography.....	69
<b>LESSON 16</b>	
Elevating Your Perspective: Photos from Above .....	73
<b>LESSON 17</b>	
Smartphone Photography.....	78
<b>LESSON 18</b>	
The Decisive Moment in Photography.....	83
<b>LESSON 19</b>	
Live Event Photography: Farmers' Market .....	87
<b>LESSON 20</b>	
Live Event Photography: T-Ball .....	93
<b>LESSON 21</b>	
Live Event Photography: House Party.....	98
<b>LESSON 22</b>	
Live Event Photography: A Day at the Ranch.....	102
<b>LESSON 23</b>	
Live Event Photography: Family Fishing Night.....	109
<b>LESSON 24</b>	
Editing, Culling, and Critiquing Your Photos.....	113

**SUPPLEMENTAL MATERIAL**

Bibliography..... 117





## Fundamentals of Photography II

### Scope:

Anyone who has taken a beginning photography course most likely has an understanding of the basics: shutter speed, f-stop, ISOs, and so on. This course is designed to go beyond those fundamental topics and help you apply that knowledge as you're out in the world taking photographs. Envision this course as an advanced photography workshop, in which we'll shoot various situations, then review and critique the results to find the best shots from each session.

Here, you'll find a series of lessons on broad subjects and situations in photography, such as landscapes, underwater and aerial shots, and portraits of both humans and animals. Because photography is really the art of capturing light, we also have several lessons that deal with that subject, including those on understanding light, photographing reflections and shadows, using flash, taking studio lighting outdoors, and experimenting with night photography. One lesson each is devoted to black-and-white photography and smartphone photography. In addition, we cover topics in art photography, such as playing with perspective, creating optical illusions, shooting still lifes, and capturing the decisive moment. Toward the end of the course, several lessons take us out into the field to cover common "assignments" that most photographers encounter at some point in their work: a children's sporting event, a farmers' market, a house party, and a family gathering. We'll close by discussing approaches for critiquing and editing your photos.

Throughout the course, we'll view photography as an exercise in problem solving. How can you simplify a chaotic or confusing scene? What tools can you use to deal with less-than-ideal light? How can you incorporate framing and layering in your shots? This course will help you learn to assess and anticipate shooting situations and develop your critical eye so that your answers to these questions lead you to intriguing, moving, and memorable results. ■

## Find the Picture

**R**ather than an introduction to the basics, this course is designed to be a workshop in more advanced photography. In this first lesson, we'll look at photography as the art of problem solving. How can you find the picture that speaks to you amid the chaos—or, sometimes, the desolation—of the world around you? In succeeding lessons, we'll explore such topics as portraits, animal photography, underwater and aerial photography, and more, and we'll critique some shots to see why some work and how some could be made better.

### Lesson Takeaways

- A key ability for a photographer in the field is problem solving. For example, if a particular situation seems too chaotic, you need to ask

Framing, long focal length, and a strong focal point bring this photo together.



yourself what you can do to simplify the scene. In an elaborate interior, you might find a spot near a window with beautiful natural light, or you might isolate an unusual architectural feature.

- Another challenge is to find a subject for your picture in a stark setting. Here, you might think about how you can play with the color palette or try different angles.
- If the light where you're shooting is uneven or too bright, find a way to adjust it. Turn off artificial lights and try to use natural light. You may also need to adjust your subject's position, moving it just a bit forward or backward, to find the right light.
- Look for opportunities to use framing. Placing a subject in a doorway or window often gives you a good starting point for a nicely layered photograph.
- Photograph your subjects at eye level and up close.
- Check to see if the overall image is balanced. Does one side of the frame have more visual weight than the other?
- If the scene has vertical elements, such as stripes, try shooting vertically.
- Problem solving in photography isn't scientific; in fact, your approach to the same situation will probably change on different occasions, depending on the mood you're in and what catches your artistic eye. The key is to take your time and concentrate on getting every bit of the frame to work for you.
- Most photographers approach a shooting situation with an agenda or goal in mind, but remember, most of the time, that goal is just a starting point. The picture you think you're going after may not be what gives you the best results. Good is what your mind imagines; great is what reality often gives you.



Moving your subjects into the best light can make a dramatic difference.

**Assignment**

Find a visually chaotic scene that you can spend some time exploring. Assess the scene and identify its particular problems, such as bad lighting or a cluttered background. What can you do to simplify the scene? Try adjusting the light or shooting from a different perspective. Keep working the scene until you “find the picture” in it.

## Understanding Light

The variety of light we see in the world is infinite. Indoors, outdoors—every place we go, we’re dealing with many different types of light sources and colors of light. That’s why it’s important for photographers to take the time to study light and experiment with how they can use it. Taking a measured, thoughtful approach to light allows you to see how you can shape and sculpt it to get the effects you want in your photographs.

### Lesson Takeaways

- When you’re exploring light, start by shooting in black and white. That way, you won’t be distracted by color and can focus on what the light is doing.
- Light changes constantly and can look dramatically different as you change your position with respect to the subject or if your subject moves, even slightly. For example, light coming straight at a subject looks acceptable, but as you (or the light) move to the side, you start to get shadows, which gives pictures more depth.
- In your home, look for a spot where a beam of light comes into the room sometime during the morning or afternoon. Place an object there, such as a vase of flowers, and watch what happens as you move around it. Then, observe the light as you turn the object.
- Often, when photographing people, we tend to concentrate on faces and eyes, or if we’re photographing flowers, we may focus on the petals in the center. But don’t forget to pull back a little and see what’s happening in your photograph from a different perspective.

“It’s not the light, but where you are in it.”

— James Stanfield, long-time National Geographic photographer



Moving around a subject lit by a single beam creates shadows, which give pictures more depth.

- Keep in mind, too, that harsh midday sun sometimes causes a raccoon effect on faces—eyes peering out of a dark mask.
- A single beam of light provides great opportunities to create clearly defined shadows.
- Skin can serve as a built-in light reflector when working with models. Position a model in a dark environment, light her from the back, and watch what happens to the light as she moves her hands around her face.
- Side lighting that's equal on both sides may result in a dead spot in the middle of the photograph. Again, move yourself or the subject around to vary the shadows for more interesting results.

### **Color and Light**

- Light comes in many different colors. If you're outside, observe how the color of light from directly overhead can shift from pink to orange to a vivid red sometimes at sunrise and sunset.
- Most modern cameras have a white balance setting that allows you to correct light to white, but instead of using that all the time, try shooting with a daylight setting to get the maximum colors in the world around you.
- Various types of lighting have different qualities. For example, tungsten light is very warm; fluorescent light has varying degrees of green in it; an LED flashlight is whitish-blue and has a sterile feel.
- If you're shooting in a situation with fluorescent light that you want to defeat, you may be able to eliminate some of the green by turning off some lights in the room and moving the subject near a window.

### **Terms to Know**

- *Hatchet lighting* leaves part of the picture in bright light and part in darkness.





Top lighting is the most common situation you will encounter, but it creates unflattering shadows around the eyes. Tilt your subject's chin up to eliminate them.

## Making a Gobo

A *gobo* (“go-between object”) is an object that comes between your light and your subject to create patterns of light and dark. Think about lace curtains hanging in a window or drops of rain on a car windshield that create a pattern on the passengers’ faces. You can make your own gobo by poking holes or cutting lines into a pie pan, a thick piece of cardboard, or a piece of cloth. Place the gobo at least six inches from the light source to keep the pattern sharp. Experiment by moving the gobo, a flash, and/or steady-stream light relative to the subject.



- The main light in a shot is referred to as *key light*; a smaller light used to brighten harsh shadows is called *fill light*. Fill light can come from another light source or from a reflector.
- Light coming upward from the floor or the ground is called *ghost lighting* and is generally not very flattering.

## Assignment

Set up a simple scene in your home that will allow you to experiment with light on either a model or an inanimate object. Using a steady light source, move around the subject, shooting as you go and noting the effects of front, side, and back lighting. Next, see what effects you can create with a steady light source and a gobo, such as a piece of lace or sheer, textured fabric.

## Working with Light in a Landscape

**M**any people start out shooting landscapes, in part because they are easy in terms of approachability. In fact, most photographers probably learn everything from basic exposure and focus to perspective by shooting landscapes. However, landscapes aren't always easy to do well. Like any other subject, good landscapes require careful thought, an investment in time, and patience as you learn how to adapt to ever-changing light conditions.

### Lesson Takeaways

- When you think about landscapes, ask yourself: What's the point? What do you want to show? Where is the viewer supposed to look? Landscape photos need a point of interest—something to hold the scene together.
- As we've said, photography is all about good light, and you can create good light any time of the day, but your lighting can reach only a finite distance. If you're showing all of nature, it can be difficult to get great light all through your frame. The best advice, then, is to shoot when the natural light is good—just before and after sunrise or sunset.
- If you're using only natural light, keep in mind that it gets harsher as the day goes on. If you start out working before dawn, you may have only about two hours of good natural light. On a summer evening, the light may start to soften well before sunset, depending on the time of year and the angle of the sun. Notice how landscapes change once they're lit by full sun that's low on the horizon, which creates dramatic shadows.
- If you want to catch the first or last light of the day, position yourself on a hilltop. Remember, too, that unless you're standing on the edge of a cliff or up on a tower, the lower your position, the less of the landscape you'll see.

- You might try using the panoramic feature on your smartphone, but typically landscapes are done with a wide-angle or a medium lens.
- In addition to light, a basic element for a good landscape picture is composition. Find some object in the foreground that you like, such as flowers, rocks, or just a pattern in the vegetation. Experiment with getting close to this element yet still retaining the larger landscape.
- What if you need to get light on your subject when nature isn't cooperating? If you're fairly sure about the angle, put your camera on a tripod and use a cable release. In fact, you can use a tripod whenever you find a good spot for shooting a landscape. This frees your hands to work with supplemental lighting, such as a wired or wireless flash, if you need it.
- If you find that your foreground element is in the shadows, use a handheld flash with a diffuser panel to match the early-morning or early-evening light. The idea is for you to light up the shadow area

Don't forget to try your smartphone's panorama feature when working a landscape.



while the rest of the world is lit by the sun. If you find a higher foreground element, such as a tall object that's already lit well, you may not need to balance the lighting.

- To keep supplemental light warm, try using a soft box and colored gels, which you can get online from a theater supply house. With this technique, you may find that you need to make your flash a little brighter because the gel reduces the amount of light that gets through to the subject. You can simply attach the gel over the flash head with a rubber band. Explore the results you get by using different color gels, combining them, or doubling them.
- Another good way to warm up light is to bounce sunlight off a gold reflector. You'll notice that the reflector fills in the shadows nicely.
- Other tricks for defeating harsh light include underexposing the subject or using a polarizing filter or a diffuser panel to get great light at midday. If the diffuser creates a dark spot—because it's





A taller foreground object lets you capture more of the landscape in your frame.

shading the sun—use the flash through the diffuser to ensure that your subject is as bright as the background or more so.

- Sometimes, the easiest way to subdue the ambient light is to increase the shutter speed. A very fast shutter can be a way of defeating bright sun.
- Professional landscape photographers often scout locations days in advance. If possible, they also plan to shoot the same scene over the course of several days. An interesting project is to choose a favorite landscape feature near your home, such as a tree, and shoot it at different times of day, with different lights, and through the seasons.

## Assignment

Set yourself a goal to get the ideal landscape shot. Get up very early one morning, travel to a favorite outdoor spot, and set up a position you'd like to record. Remember to select a specific subject you want to show—something more than “all of nature.” Work the scene until the light starts to become harsh, and then try some techniques for softening it.

Flash, gels, and reflectors allow you to control the lighting in the foreground of your landscape.



## Taking Photos under and around Water

**W**ithout question, underwater photography is tricky. Many professionals spend a lifetime—and a great deal of money—trying to master the art of taking truly good underwater photographs. It’s also true that in underwater photography, you really do get what you pay for; higher-end equipment produces better results. But you can still have fun experimenting with underwater shots by using just your smartphone and a waterproof bag or glass container or by setting up your camera in a 10-gallon aquarium. But be careful when using a “poor man’s” underwater housing. One big splash can be disastrous to your gear!

Bright light, clear water, high ISO, and lots of depth of field will give you the best chance at a sharp underwater image.





## Lesson Takeaways

- When taking underwater pictures, you actually want to shoot at midday, that is, in the harshest light of the day. If you're shooting on an overcast day, your camera will have a more difficult time auto-focusing because there is less contrast in the water—everything is flat. Beams of light, however, give you better color, shadows, and depth.
- Be aware that water magnifies things up to three times their actual size. In these circumstances, a wide-angle lens becomes a medium, and a medium lens becomes a telephoto. Because of this magnification, you may want to shoot as wide and as close as you possibly can.
- Visibility in the water is vital in underwater photography. Again, in most cases, get as close to the subject as you can for best results.
- Keep an eye out for reflections on the surface of the water. To capture these, move back a little bit instead of staying right on top of the subject. If you wait until the water is perfectly smooth, the result may look like your subject is emerging from a mirror.
- In photographing tanks at a public aquarium, it may be difficult to avoid unwanted reflections. Look for situations in which the tank, rather than the surrounding room, is fully lit. If you or other people are lit and are standing in front of a glass surface, the only way to eliminate reflections may be to get up close to the glass with a rubber lens hood or drape the camera with a black sweater or jacket. You need to eliminate other light sources so that your camera can concentrate on the light inside the tank.

## Underwater Photography Gear

- An underwater photography rig of the type used by professionals can cost \$10,000 or more and is quite heavy and bulky. In contrast, a prosumer (professional-consumer) model camera with an underwater housing costs less than \$1,000 and may weigh only about a pound. In both cases, the controls are on the back of the housing.

When composing a split, your main subject is below the water. Consider how placement of the water line draws or distracts attention from it.



- Sports action cameras are relatively bulletproof and inexpensive. You can strap this type of camera to your chest or to your head as you swim, and it will take pictures on a timer. These cameras can also shoot HD video.
- Other options for underwater photography include point-and-shoot waterproof cameras or a smartphone in an underwater bag. If you use an underwater bag, test it without the camera first by putting a piece of paper inside, then submerging it to make sure the paper stays dry. You might also try putting your smartphone in a glass container, such as a jar with flat sides, but don't fully submerge it; keep the opening of the container above the waterline!
- Another approach is to shoot with your camera inside a 10-gallon aquarium. Set the camera on center-weighted auto-focus and put a rubber lens hood on it to avoid getting reflections from the front of the glass in the lens. A cable release can help to trigger the camera while you're holding onto the tank. Remember, though, this technique, while yielding professional results, can be very risky. One errant wave or splash at the pool, and your camera could be ruined!

### Shooting Splits

- A photograph that's shot partially in and partially out of the water is called a *split*. To get a good split, the water should be calm. Remember, you want to see both what's above the water and what's below it.
- How do you compensate for the difference in light under the water and on the surface in a split? Increase the ISO and use a high aperture. That way, you're focused on your subject all the way through the background. You should also expose for the light above the water.
- There are a number of factors to consider in lining up a split, such as wave action on the surface that could splash onto the front of your port or lens. Do you want the port to be clean, or do you want it to be spotted, like rain on a car windshield? Probably the best approach is to have patience and be tolerant of mistakes; in



The farther you are from your subject, the more of its reflection you will capture. This works in a split as well as above water.

shooting splits, you'll end up with many junk frames, but you can also get very interesting results.

- When you're shooting splits, you'll be looking up slightly, so put houses, trees, or mountains in the background to give depth and a sense of place. Pay attention to camera orientation as you shoot. If the camera is crooked because you're concentrating on getting it perfectly half in and half out of the water, your photo may show the ocean running downhill.

### **Assignment**

Craft yourself an underwater rig using a large glass jar or a clean, unused aquarium. Take your gear to a pool or a clear stream and spend some time experimenting with it. See if you can get some fun shots of children playing or minnows darting through underwater plants. As you work, take note of the conditions and techniques that yield the best results.

## Photographing Reflections and Reflectivity

In this lesson, we'll discuss something we deal with all the time in photography, although we may not be aware of it: reflections and reflectivity. Photographers fight reflections all the time—think about glare on a window—but reflectivity can also be a lovely way to bring out color or brilliance in an otherwise dark scene or to create layered images. You can try working with reflections in black and white, but with color especially, you'll find that they can be magical.



The big challenge with photographing a mirror—or multiple mirrors—is keeping the photographer out of the frame.

Sometimes all it takes to eliminate a bad reflection is the photographer changing position.



## Lesson Takeaways

- Reflections can be good or bad, and as a photographer, you should always be thinking about ways to either use a reflection if it's working for you or eliminate it if it's hurting your photos. Often, eliminating a bad reflection is as simple as taking two or three steps in one direction or another or trying a higher or lower angle.
- Reflections can be an aid in making layered photographs. The reflective surface itself automatically constitutes one layer and whatever is seen in the surface is another layer; you can build up additional layers from there.
- Mirrors, of course, are the ultimate reflectors, but working with them can be tricky. You need to carefully consider depth of field, focus, and what you want to show in the scene you're photographing—and you may want to keep yourself out of the shot.
- If you're shooting a mirror picture, you may want to avoid showing the back of the person looking into the mirror because that view usually isn't all that interesting.
- Remember to have fun when you experiment with reflections; they can help you get a different perspective on the world and explore light in ways that you might not normally think about. Try doing one shoot where all you think about is reflectivity.
- A circular polarizing filter is good for handling reflections and reflectivity. As you spin it, it changes from allowing all available light to come in from any direction to reducing the light to come in from one direction. In other words, it reduces the way that light can come in to the lens.

Always go where the light is—  
especially natural light.



When moving positions isn't an option, a circular polarizing filter will cut down on reflections.



## Experimenting with Filters

Although there are multitudes of filters available, you may want to use one that is essentially just clear glass—a UV or Skylight filter—to protect your lens. You might also try a graduated neutral-density filter, which is smoked at the top and clear at the bottom. You can use this filter to dampen down the light in an overly bright sky, getting the exposure you want even if you're not on site at the right time of day or in the right conditions.

## Assignment

Take a walk outside your house or through your town, looking for interesting photo opportunities in window reflections. The windows of office buildings, for example, sometimes offer intriguing broken reflections of the sky or surrounding buildings. Once you've played around with shooting some reflections, try shooting the same scene with a polarizing filter to see how it changes the results.

## Photographing Shadows and Backlighting

For those of us who care about photography, shadows are always on our minds. The key for dealing with shadows is to look for ways that they can help your image rather than hurt it. Most of the pictures we see are over the top in terms of light. They're lit from the front because people have been trained all their lives to have the sun at their backs and the subject ahead of them. But if you can look for elegant light in a shadowy scene and figure out a way to work with the shadows, you can create much more memorable images. Shadows and minimal lighting can help you clean up the world around you and communicate to your viewers directly.

### Lesson Takeaways

- In less-than-optimal conditions, try to think about shadows as helping you rather than hurting you. For example, if you're shooting

In a shadowy scene, place your main subjects where the light is.



in a grove of trees but you've missed the early-morning light, you'll see shadows all around, but try to make them work to your benefit. An interesting way to pull off a heavily shadowed scene is to focus attention on where the light is, expose for the brightest area, and let the rest of the scene go dark.

- The light in the middle of the day tends to give people raccoon eyes—shadowy masks across the face. To address this problem, soften the light with a diffuser panel or even a thin piece of white cloth. The diffuser is basically a shade that allows some sun to get through. Notice that the closer you move the diffuser to the subject, the brighter the subject becomes.



To cast shadows on your subject, the light source must be strong and direct.



Sometimes the absence of light can be used to draw attention to your subjects and create drama.

- Another trick for dealing with shadows is to use a reflector to redirect the light into the shadows. You can use almost any bright, stiff surface for this—a piece of mat board from an art shop or a bed sheet tightly strung between two trees. You can also buy a reflector that has a bright white side and a gold side; using the gold side often lends a warm tone to the image.
- You might also combine an off-camera flash with a diffuser. This trick helps you overpower the sun. Turn the flash up or down in increments to get the results you're looking for. This technique requires you to work within just a few feet of your subject.
- Most of the time, photographers fight to get rid of shadows, but we can also try creating them with a specific artistic intent in mind. Try putting a relatively transparent object, such as a lace curtain, in front of your subject to create interesting shadow effects. Note that

to see the shadows, you need to have a fairly strong light source, and your subject often needs to be close to the object that's creating the shadows.

- Situations with very little light offer opportunities to do some storytelling. Think of the possibilities in shooting an abandoned house or an empty swimming pool with only a flashlight or light from a nearby room as a light source. Experiment with ghost lighting, try using gels of various colors on your flash, or use backlighting to create mysterious silhouettes.
- In low-light situations, mount your camera to a tripod and use a cable release. If your camera doesn't have that capability, put it on self-timer to eliminate the chance that you'll jiggle it when you shoot.

### **Assignment**

Challenge yourself to shoot an outdoor scene in harsh lighting conditions—in late morning or at midday. First, see if you can take advantage of the shadows by placing your subject in the brightest part of the scene. Then, see if you can defeat the harsh light by using a reflector or an off-camera flash with a diffuser.

## Big Results from Little Lights

Probably the most important advice about working with a hand-held flash is to avoid having it mounted on the camera if you can. In other words, get the flash off to the side, wirelessly or with a cord, and start playing around with shutter speeds, especially indoors and toward dawn and dusk. You'll be surprised at the extent to which you can control the existing light with this technique. A very mundane scene can become quite dramatic with flash at almost any time of the day.

### Lesson Takeaways

- Direct flash on a camera probably ruins more pictures than it helps. It's useful to be able to fire a separate flash wirelessly from another position to light up your subject.
- For those who don't own a remote trigger for a flash, there's another solution to getting the light off the camera. Many flashes now have a built-in optical slave. That means that you can fire them with a burst of light from another flash, even if it's a flash from your camera. A pop-up flash on one camera can communicate to another flash—through TTL metering—not only when to fire but also



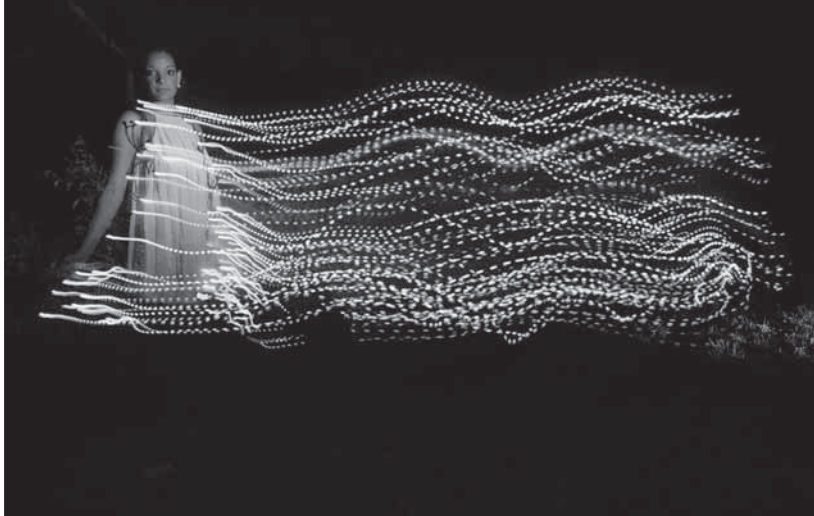
Optical trigger (top) and radio trigger (bottom).



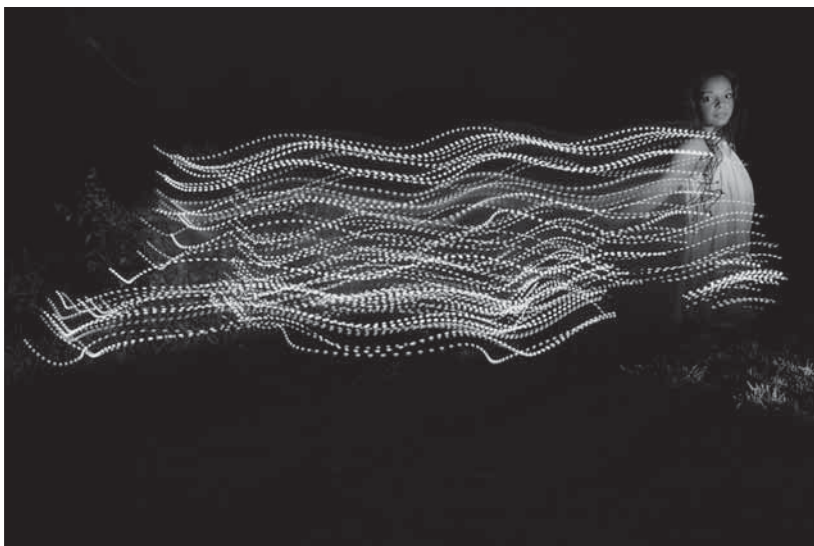
Adding subtle flash to panned action in low light creates ghosting effects.

the amount of light needed. The pop-up flash sends a pre-flash burst, communicating the amount of light the other flash needs to fire; then, the exposure is made.

- These days, inexpensive radio triggers are effective and widely available. If you want to use more than one flash, you can put a receiver on each one and a transmitter on top of your camera. In addition, many advanced DSLRs have the capacity to send signals wirelessly to multiple flash units.
- Try using a slow shutter speed and multiple flashes in near-dark conditions while holding the camera by hand rather than setting up a tripod. Provided your subject is in focus, the flash will render it sharply, even as the rest of the world goes blurry. Experiment with different shutter speeds for dramatically different results.



In front curtain sync, the flash goes off at the start of a long exposure.



In rear curtain sync, the flash goes off at the end of a long exposure.





A remote trigger can control as many flashes as you need, at a significant distance from your camera.

- Remember that the shutter and the flash are independent of each other. Slowing down your shutter speed does not change the intensity of the flash. The flash will stay steady and do as you've instructed it to do as long as its batteries are charged.
- You can use flashes in many ways, and you'll find that you can change the light in a scene dramatically using flash. With a flash, a tripod, and a cable release, you can slow your shutter speed down and turn what's almost nighttime into day.
- Experimenting with flash, especially when dealing with natural light that's changing, can seem a bit complicated because it involves a number of moving parts—continuously adjusting the shutter speed and aperture. The whole process is really about fine-tuning and practice. Getting the shot you want is not something you can rush through.



Adding flash allows you to use a faster shutter and smaller aperture, which “turns down” the ambient light and draws focus to your subject.

- You can also add flash to scenes with motion by setting the flash off at the start of the exposure or at the end. This is called *front or rear curtain sync*. This technique yields the most obvious results when indoors or in other low-light situations.

### **Assignment**

Find a willing subject to help you practice the front and rear curtain sync techniques discussed in the lesson. Have the model move slowly, carrying a flashlight or a candle, and try shooting both with and without a tripod.

## Taking Studio Lights Outdoors

In this lesson, we'll look at studio lighting. We'll first cover the two basic types of light that most photographers use, and we'll take a look at various devices for shaping light. Then, we'll take our studio lighting outside and see the amazing degree of control it can provide over ambient light. We can even use studio lights to turn daytime into night.

### Lesson Takeaways

- One type of studio light uses a central power pack. Besides delivering power, the power pack controls the modeling lights, which are designed to allow the photographer to focus and to show how the model looks in particular lighting.
- The advantages of the central power pack are that it is lightweight, relatively inexpensive, sits on the floor or on a table, and is easy to travel with. Unfortunately, you can never get farther away from a power pack than the length of your cord—about 10 or 12 feet. If you want to shoot outdoors, this limits where you can place your lights and your subjects.
- Most power packs have different ways to adjust the intensity of light. Many allow you to go from 500 watt-seconds to 250 or 125. Cords deliver this power to flash tubes at each separate head, which provides the burst of bright light used to illuminate your subjects.
- Many power packs give you the ability to trigger the lights in three ways: by using a sync cord that goes into the camera, a radio trigger, or an optical slave. Even if you like using a radio trigger, be sure to

Remember, shutter and flash are not tied together; the shutter does not influence how much light the flash is putting out. They're independently owned and operated. The shutter is controlling the house lights—the ambient light.



Using powerful studio lights on your models is another way to bring down the ambient light in a scene and, thus, minimize background distractions.

carry an extra sync cord with you in case you run into problems with the electronics.

- A step up in price and weight are monolights. A monolight system puts the power pack in each light head. Although more expensive, this kind of system gives you much more freedom of light placement around the space you are shooting. However, this equipment is more expensive and top-heavy. It requires heavier light stands, often weighted with sandbags on the bottom. One additional advantage of more expensive light sets is that they create such a powerful burst that the light can be of very short duration, allowing you to get great depth of field and freeze action repeatedly.
- Even though they're called studio lights, you can still take this equipment outside. Studio lights often give much better results

than small, handheld speed lights in overpowering the sun, enabling you to control the light, no matter the time of day.

### Terms to Know

- Studio lights generally give you the ability to mount light-shaping tools, such as a soft box or grid, to the front of the light. Very seldom do photographers use just a flash head without putting any kind of modifier in front of it or, at least, bouncing the light off a ceiling to soften it.
- A *snoot* is a funnel-shaped device that goes over the front of a light. It basically funnels light into a circle.
- *Grids* or *grid spots* are among the main tools for shaping light; their primary advantage is that they keep light from going everywhere. The divisions inside various grids create different patterns. Some allow the light to flare out a bit, while others narrow the beam tightly.
- *Honeycomb grids* are perhaps the most common. They are metal and are labeled in different patterns; for example, a 40-degree grid allows light to go out to 40 degrees and no more. That's useful for controlling the light and preventing it from flaring into the lens. As the grid pattern gets smaller, the beam of light becomes smaller, very focused and concentrated, but you also lose a great deal of light. You can also find cloth grids that attach to the inside of a soft box to do a similar job, although not as precisely.



Photo taken with a snoot mounted on a studio light.



Grids broaden or narrow the spread of light from a studio light head.

- A *soft box* is another tool that softens the light. Many have a diffusing panel on the front and in the middle, giving you double diffusion.

### **Assignment**

If you have access to studio lighting, choose an outdoor subject and experiment with various ways of crafting the light, such as using a diffuser, soft box, or grids. See if you can turn day into night!



## Human Portrait Photography

**W**e're all familiar with studio portraits, but candid portraits taken out in the world—sometimes called *environmental portraits*—are often much more imaginative. Outside the studio, you can see more of what's going on in your subjects' lives—their occupations, their relationships, their leisure activities—and you can incorporate those elements in your portraits.

### Lesson Takeaways

- There are two basic types of portraits: studio and candid. Of course, you can shoot candid portraits in the studio, but you often get better results in real-world situations, with your subjects at home, in the backyard, or at work.
- When you shoot portraits outside the studio, it's often nice to give some sense of location. Let the viewer know whether your subjects are, for example, in the country, the suburbs, or a city. You might also try shooting portraits both wide—to show the whole scene—and tight—to just see the subjects.
- Another approach that can make subjects really pop is to use an extremely shallow depth of field. Focus on the eyes and allow the background to become a soft blur. This keeps the subject sharp yet gives just a hint of the setting.
- Soft, simple, or warm lighting can lend a painterly feel to portraits.
- In many cases, the best portraits you shoot will be those of your friends and family—people in your life who mean a great deal to you—because you have close, repeated access to

[My subjects are] partners with me. They're willing participants. And we've entered this agreement for a very short time. We're going to try to create art. We're going to try to create something lasting.



Portraits don't have to be formal to be effective. Make your subjects comfortable and relaxed, and you'll get flattering, memorable shots.

them. Be patient, stay in the background, and watch for amazing moments to happen.

- After you've set up a portrait—gotten the framing and the light right—wait for a little something extra to happen, maybe a bit of emotion. Look for a bit of tenderness between your subjects or a human moment to transform the shot from something straightforward to something candid and real.
- It's generally easy to take portraits of people you know in situations you control, but what if you want to photograph people you don't know? The best approach is to be friendly and try to gain the subjects' trust. And always let them know that you're willing to share your pictures with them if they'd like.



A very wide aperture blurs out the background and keeps the focus on your subject.

- If you build up a good rapport with people, they'll be more relaxed when you're photographing them. In fact, you'll get the best candids when the subjects actually begin to ignore you.
- In shooting group portraits, take time to arrange and pose the subjects to suit your purposes. Again, if you're friendly and open, people are usually quite willing to follow your directions.
- In many situations, it's fun to create and print a photo montage. If you photograph a wedding, for example, choose several pictures that you can put together to tell the story of the day. Another good exercise is to see if you can tell story—with a beginning, middle, and end—in a single shot.
- Many cameras allow you to set a number of autofocus sensor points, anywhere from 1 to 64 and beyond. But for portraits, it's



Consider making portrait montages for gifts or display.

often a good idea to use single-point autofocus to avoid having the camera focus on too many things in a busy field.

### Assignment

Find a model who will allow you to practice taking an environmental portrait. Ask the subject to collaborate with you by choosing props or the environment for the shoot. The goal should be to find a location or set a scene that really brings out the model's personality or interests. Pay attention to the background, and try photographing your subject both wide and tight,



We tend to think of portraits as pictures of faces, but other details of people's clothing and environment can tell us a lot about them.

horizontally and vertically. A good trick for making your subject stand out is to use an extremely shallow depth of field.

## Animal Photography

**A**nyone who has pets around the house has probably done some animal photography. The keys for getting unique shots of your pets are to have your camera ready at all times and to get down on eye level with the animal. It's also fun to try getting some studio-type shots of your pets or even other animals, such as insects, you find in the backyard. This lesson describes some relatively simple setups for studio shots of animals. An important benefit of photographing animals is that the images you create may move viewers to a deeper appreciation of our fellow creatures on the planet and a greater interest in protecting and conserving wildlife.

Take pictures of your pets from their eye level.





Consider your setting. Make sure your animal doesn't blend in with the background.

### **Lesson Takeaways**

- Everybody takes pictures of their pets, but how can you make your animal pictures stand out? That starts with two things: repeated access and plenty of time.
- It almost goes without saying, but if you want to take pictures of your pets, have a camera handy at all times and be ready for anything. Set your camera to autofocus and autoexposure so that you don't miss fleeting moments.
- No matter what kind of animal you're photographing—a dog, a goldfish, or a rabbit—get on its eye level. Don't stand up at your height and shoot downward.



Photographing people with their pets keeps the animal comfortable and makes a beautiful double portrait.

- With an unusual animal, such as a snake, photograph the full body first, then go after the detail shots—the coil of the tail or the patterns of the scales—with a macro.

### **Studio Portraits of Animals**

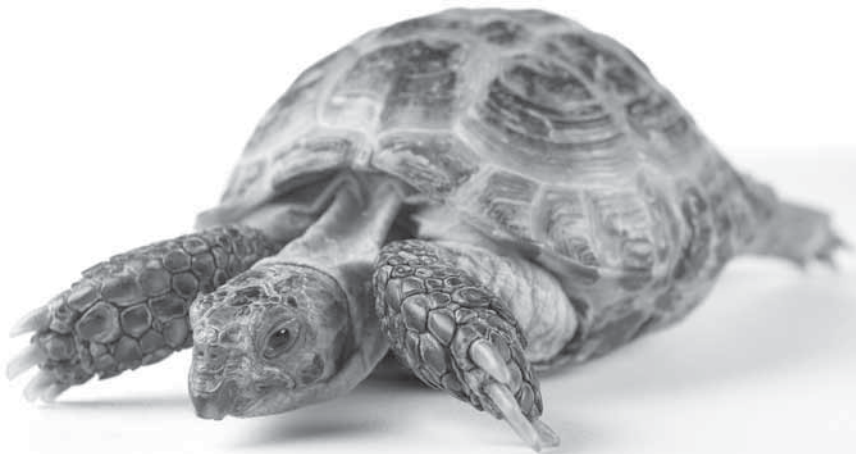
- If you want studio-type photographs of animals, use a black background and a three-light (or more) setup with grids. Glue black fabric tightly to a vinyl board and hang a sheet of black fabric for the backdrop. You don't want any detail in the background; the animal should be the star of the show.
- Arrange the lights so that one comes from each side and one from above. The light coming from above—the top light—will give you nice definition, which is critical when you're working with dark-colored animals on black. Often a light coming from in front isn't really necessary because front-lit subjects can look a bit harsh.



Study the detail and depth provided by shadows cast by two sidelights, and notice how they can become lost with strong light coming from the front. Using two side lights also enables you to photograph the animal no matter which direction it turns or walks.

- Set the sidelights at a lesser power than the top light to put a highlight on the animal's back.
- Photographing animals against white requires a slightly more elaborate setup. Use one or more lights to brighten or “wash” the background completely clean. Then bring the other lights to bear on the subject, from the top, sides, and front, until you get the look you want. This setup takes practice and plenty of experimentation, even though it seems fairly simple.

A shooting tent allows you to photograph small animals in an environment that is safe and comfortable for them and easy for you.



- A higher-end light set really shows its advantages with animal photography, providing a fast flash burst that enables you to stop even the quickest motion and lots of depth of field.
- For animals or insects that tend to run away, use a cloth shooting tent, which also serves to soften and diffuse the light.

### **Assignment**

If you have a small, cooperative pet, try taking a studio-type portrait of it. Use a white or black background, as described in the lesson, or try a more realistic-looking surface, such as slate, grass, or leaves; all can take on an interesting look when revealed with high-end lighting. If you don't have a pet, spend some in your backyard or a park photographing birds, squirrels, or insects. The two keys here are to be patient and stay quiet; try to make yourself as much a part of the background as possible.

## Night Photography

**N**ight photography might seem almost impossibly difficult at first glance, but the truth is that most of us live in areas with plenty of nighttime light, and even in remote parts of the world, we have starlight and moonlight. In fact, light abounds at night; you just have to know how to capture it. In this lesson, we'll discuss a number of experiments for getting interesting—even breathtaking—photographs at night.

### Lesson Takeaways

- We often shy away from taking photographs at night because we think the show's over—and sometimes, it is. But most of us live in urban areas where some light is almost always available. You can

Under the right conditions, all you need is a tripod, a cable release, and a long exposure to make good photographs at night.





Use flashlights or car headlights to “paint” objects with light.

even “harvest” urban light well outside a city; for example, sometimes, the sky will glow just from distant streetlights bouncing off clouds.

- Getting shots at night requires a little patience and a cable release or a self-timer on your camera. A tripod is often the most surefire way to pull off steady shots with long exposure times. To get started, dial the ISO into the thousands and play around with different shutter speeds. If you notice any digital noise or static, dial down the ISO.
- Have a subject “paint” a nighttime scene by moving a flashlight over it, or have the subject walk through the scene carrying a flashlight. Set the shutter speed from 30 seconds to 1 minute. Another fun experiment is to have multiple people lighting a scene with flashlights or smartphone lights.

- As an alternative, try sweeping a scene with car headlights. In this case, wait until it's almost dark but not completely. Set the ISO fairly low and use a multiple-second exposure; adjust your settings from there.
- Around holiday time, look for outdoor scenes with decorative lights. But always make sure you have a little bit of defining light in the sky; otherwise, you'll have a hard time balancing out the holiday lights while still getting some detail in the background.
- *Open flash* is another fun technique to try in a completely dark scene. Lock the shutter open on bulb setting using a cable release and a tripod. Next, you'll need a model who will walk through the scene and an assistant with a hand-held, battery-powered flash. As the model walks, the assistant lights him or her up repeatedly. This technique requires some practice and precision, but it can yield interesting results.

### Shooting Star Trails

- Shooting a star trail requires setting your camera's ISO up to about 3200. Make sure, however, that there's no possibility of someone suddenly illuminating the scene with a flashlight or headlights, which will ruin your photo and could damage your sensor.
- Before shooting a star trail, look up the lunar tables for your area to find out when the moon will not be visible. You'll need 90 minutes to 2 hours to make one exposure, so you need to make sure that it will be completely dark out, with no moon glow or city lights.
- Position your camera on a tripod and point it to the north. Start by putting your lens cap on and taking one picture that's dark. You'll use this in post-processing to remove noise and imperfections in your sensor. Then, set the camera to take a picture every 30 seconds over the course of 90 to 120 minutes. Believe it or not, the stars move a little bit

[Night photography] is a little bit like cooking. You kind of season to taste.

every 30 seconds; shooting at that rate will allow you to capture this movement.

- You can also try shooting for less time overall, say, an hour, but the results will be less dramatic; your final image may look like a meteor shower or the paths of comets.
- Once you're done, run the single dark frame and all the rest of the frames through a computer program that combines the shots. The software will quickly render the night sky and all the star trails.



The open-flash technique allows you to make multiple exposures at night or in darkened spaces.

- There are a number of benefits to doing a series of exposures and putting them together in post-processing. Perhaps most important, a single cloud or airplane passing by won't ruin your shot. In effect, you're increasing your odds of getting a beautiful star trail shot if you take a series of images rather than attempting one long exposure.

### **Shooting the Milky Way**

- The Milky Way runs roughly north to south in the sky, and the southern part is the brightest. It's often interesting to pick a closer subject or structure to focus on, keeping the Milky Way in the background. Keep the shutter speed at 20 to 25 seconds so that you don't get movement in the stars and set the aperture to  $f/2.8$ .
- Smartphone cameras are probably not light-sensitive enough to shoot the Milky Way, but many other kinds of cameras will work. If your lens doesn't go to  $f/2.8$ , try it at  $f/4$  or  $f/5.6$ . Leave the shutter open for 25 seconds and dial the ISO up as high as you can.
- Make sure you're shooting RAW files because you may have to do some post-processing to make the shots turn out right.

### **Assignment**

Go to a location outside of town, away from major light sources, and try "painting" a scene with a flashlight. An old building, a favorite vehicle, or an isolated group of rocks or trees work well for this assignment. Put your camera on a tripod, use a cable release, pick a low ISO, and see what you get as you sweep light over the scene.

## Art Photography: Perspective and Illusions

**W**hat do we mean when we talk about art photography? For many people, it means going beyond the obvious, taking pictures that are lyrical, fun, or surprising. Art photographs also tend to tell a story and, in many cases, raise more questions than they answer. In this lesson, we'll cover a few projects to get you started thinking about achieving those kinds of goals in your images.

### Lesson Takeaways

- Roads make interesting subjects for art photography, especially long country roads. Look for scenes in which the road forms a kind of broken continuum; in other words, it vanishes behind a hill

Think of macro photography as telephoto in miniature, allowing you to zoom in on tiny details.





before appearing again, giving your photograph a sense of depth.

- Plants or flowers shot with a macro lens generally yield beautiful results, especially when you get on eye level with the subject, use a soft box or a diffuser in harsh light, and shoot against a black background. The macro acts basically like a telephoto in miniature. It's smart to use a tripod when shooting macro because you want to use the smallest aperture you can get.
- Another way of showing flowers artfully is to do multiple exposures on a windy day. The results look similar to an impressionistic painting, and the more you move the camera, the more painterly the image becomes.

That's what the creative process is, isn't it?

Playing around and seeing what gives you intriguing effects.

A broken continuum gives depth to your landscapes.





Using a shooting tent, or even a simple backing board, lets you leave plants in situ when photographing them.

When playing with perspective, your focus must be sharp all the way through the frame.



- If you want to try optical illusion photography, search the Internet for ideas. You'll find fun shots of people holding up the Leaning Tower of Pisa or grabbing an airplane out of the sky. You may even want to compose a unique family portrait that incorporates an optical illusion.

**Assignment**

Do an Internet search on “optical illusion photography” to get some ideas to which you can add your own creative spin. Choose one idea to use for a portrait of your family or a group of friends. Take the time to make the illusion believable during the shoot; don't try to fix it in post-processing.

## Art Photography: Having Fun

In the last lesson, we started to explore art photography. You can take your images one step further in this direction by setting up humorous, bizarre, or outrageous scenes. Often, the photographs we're drawn to are surprising in some way, and in this lesson, we'll explore a number of out-of-the-ordinary settings that should get you thinking about how you can do something different in your photographs.

### Lesson Takeaways

- You can have a lot of fun in photography with a simple, cheap prop you make yourself, such as a box decorated with a smiley face. Take it to work and photograph your colleagues wearing the box head while they're busy with important tasks. Some people may

You can get a lot of mileage out of a silly prop.

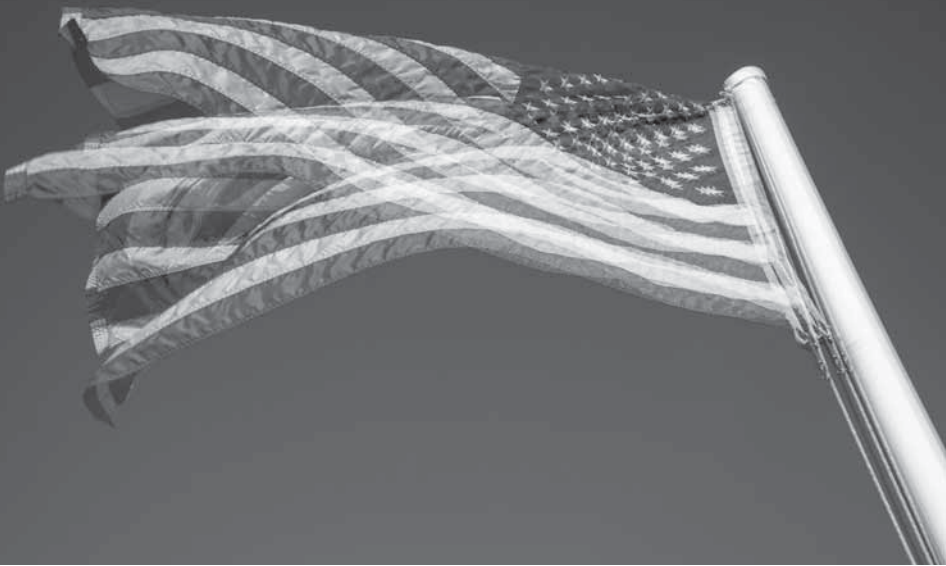




Multiple-exposure portraits are an easy trick to add humor to your repertoire.

not find such images funny, but if you enjoy them, there's no reason for you to hold back—provided your coworkers share your sense of humor. We see so many sad and upsetting things in the news that it doesn't hurt to be silly once in a while.

- Part of being an artist is seeing things in a different light, and that often means putting together scenes that may not make sense or be appealing to anyone but you. Don't be afraid to try juxtapositions that might seem strange to others. Be patient and work these shots until they say something interesting or meaningful to you.
- Multiple-exposure portraits make for artful images, and these days, you can set many cameras to put two or more exposures on one frame. Dress your model completely in black and use a large black cloth as a backdrop. Focus on the model's face and neck—the only bright spots in a large black field. The black background serves as a



Multiple exposures can be used for effects ranging from funny to surreal to striking.

blank slate on which you can repeat the model's face over and over again. Try this with both moving and stationary subjects.

- “What’s on your mind?” is another project you might try with multiple exposures. Set the camera to put two exposures on one frame. Take one silhouetted shot of just your subject’s head. Then, on a black background, shoot several objects, such as candy or coins, that seem to characterize the subject. By carefully combining the two images, you can show exactly what’s on your subject’s mind.
- Panning when the light is low creates a lyrical effect. Something similar is a technique called *slow-shutter zoom*. Here, you set the camera on a very slow shutter speed. Then, during the exposure, you zoom in or out to create streaking effects.

- Take time to review your offbeat images, even if you don't do anything else with them. Often, you learn new things by trying something out of the ordinary, even when it fails. You just might be surprised at how pleased you are with a certain effect.

### **Assignment**

Try one or more of the techniques discussed in this lesson for creating offbeat photographs, such as multiple exposure or slow-shutter zoom. If you're looking for a more serious assignment, try shooting a scene with one out-of-place element thrown in, creating an image that asks more questions than it answers. What story does that one element tell? What questions does it pose?

## Art Photography: Still Life

Still lifes are thoughtful studies that don't move, almost like paintings. But a photographic still life is, in some sense, alive in front of your camera. You can manipulate the objects in a still life to your liking, drawing the eye of the viewer to particular elements, and you can study it from different angles to get the perspective you want. Because you can take your time with still lifes, this type of photography is also a wonderful exercise for honing your craft.

### Lesson Takeaways

- One clean, classic approach to a still life is to light it softly and shoot down on it from above. You might also try shooting from

Good light, a bit of reflectivity, and a focal point bring your composition together.







Still lifes don't have to be still. Try a slow shutter speed to catch a little motion.

down low or through something. Change the depth of field as you go by increasing or decreasing the size of the aperture.

- Just as you would with any other subject matter, pay careful attention to the light and to backgrounds in shooting still lifes.
- Still lifes sometimes have a tendency to be dull, but there's really no reason for them to be anything but fascinating. You can take the time to craft still life scenes carefully, without worrying about events going

If you approach [photography] with an attack attitude, where you've just got to "get 'er done," it often will not be nearly as exquisite as if you pace yourself, think it through, and solve problems.

on around you. In fact, if you're unsure about how a still life looks, you can walk away from it and shoot it again later with fresh eyes.

- *Found still lifes* are scenes that appear in front of you, while *constructed still lifes* are those you set up. With either type, it's important to wait for the right light or get the right light into the scene; use reflectors or a flash or try just opening a nearby door or closing a shade if you're indoors.
- A found situation can be difficult to distinguish from all the other clutter of life; the key is to look for such situations all the time. Seek out groups of interesting objects and situations with soft lighting. Also look for opportunities to create a constructed still life within a found situation, for example, by arranging a group of seemingly disparate objects or moving just one object to draw the eye.
- Constructing still lifes is an art form in itself that can take time, but again, you have all the control and have plenty of ways to experiment. Do make sure you have a single point of interest to catch the eye.
- Creating an illustration with food, such as a food face or a food animal, can be a fun project. When starting out, try to shoot straight down on it, rather than at an angle.
- Still lifes represent measured and controlled photography, often worked on a tripod with a cable release. Using a tripod and cable release will let you shoot with very low ISOs and very small apertures to get good depth of field. You might also find that a tripod slows you down—makes you consider every inch of the frame, including the corners and around the edges. Remember, if something's in your picture, it should be there because you want it there.



Still lifes are an opportunity to “run the apertures” and see the difference depth of field makes in a scene.



**Assignment**

Set up a still life in your home based on a theme, such as a birthday, graduation, or holiday. Gather objects that relate to your theme and arrange them on a complementary background. As you work, experiment with increasing and decreasing the depth of field and shooting from different angles. Leave the still life overnight and return to it the next day to see if you have any new ideas for interesting shots.

## Black-and-White Photography

**B**lack-and-white photography represents an entirely different realm, in which the same rules don't apply as they do with color. Perhaps most important, black and white looks good in just about any light; it gives you a chance to do things you would never dream of in color. Black and white also allows you to communicate ideas quickly and directly, and monochrome images have a sense of drama, mystery, and timelessness.

### Lesson Takeaways

- When shooting in black and white, a good mantra to keep in mind is this: "Light is light to black and white." In other words, the quality of light doesn't seem to matter as much in black-and-

Black and white works well in situations where the light is too harsh for a good color exposure.



white photography as it does in color. To fully understand this idea, try shooting the same scene in color with pure white light, then with warm modeling lights. You'll notice a definite difference in the two images. But if you set the picture to monochrome and shoot with different lighting, the results will look remarkably similar.

If you find a good scene, it's like a stage. We just need the players to appear.

- Of course, if you shoot in the middle of the day, you'll still get lots of shadows, but black and white is much more forgiving of them. You can shoot in black and white at any time of the day, provided you watch the angles and the shadows.
- In contrast to color, black-and-white images tend to emphasize reflectivity, surfaces, shine, and tone. Each image is really about

Black and white gives modern photographs an old-fashioned, timeless feel.





Black and white simplifies a scene, but don't forget to pay attention to background elements.

where the light is glancing and striking, which is what makes harsh shadows more acceptable.

- Black and white is also a great way of getting to the essence of a subject and communicating your message quickly. Black-and-white images seem to give an instant read on emotion—irritation, fear, love, grief, and more. Further, black-and-white photography seems to highlight the body language and facial expressions of the subjects—it cuts to the chase, so to speak.
- Whether you're shooting in black and white or color, don't forget that good rules of composition still apply: Make sure that everything in the frame is working for you. There should be no dead space unless it's intentional.
- Setting your camera to monochrome allows you to see what you're getting on the back panel without the distraction of color.



Shadows and silhouettes can be effective elements in black-and-white photography.

If you don't have a monochrome setting, you can easily change your pictures to black and white using any number of computer programs, but you won't be able to see the effects as you work, which is very helpful.

**Assignment**

Choose a period of time, such as a week or a weekend, and challenge yourself to shoot only in black and white. During that time, photograph a variety of subjects, including portraits, landscapes, and action scenes. As a further challenge, try working in difficult light, such as the harsh light of midday. Notice the differences in the results you get with light when you're working in black and white versus color.



## Elevating Your Perspective: Photos from Above

**M**any photographers like aerial shots because they give a unique and cleaned-up view of the world, one that's not cluttered with ground-level distractions. Aerial photographs are also the perfect way to show large expanses of land or big crowds, such as you might find at a sporting event. You might think aerial photography would be expensive, but it doesn't have to be; in this lesson, we'll suggest a number of ways to get yourself up off the ground for a new perspective.



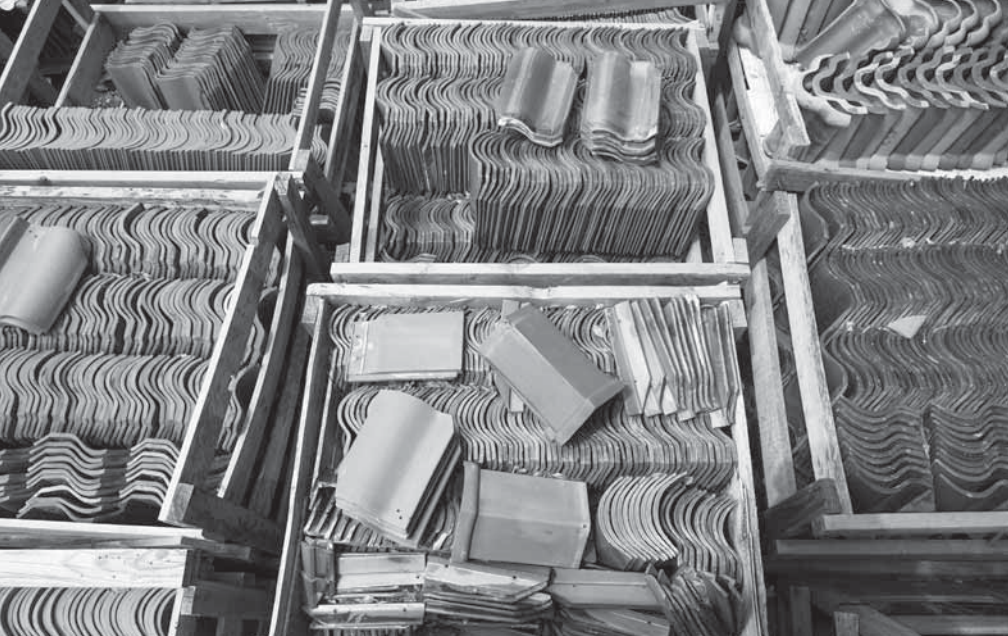
In aerial photography, the ground often becomes your background.



If the ground is interesting enough, a good aerial can simply be taken from eye level.

### **Lesson Takeaways**

- Aerial photography can yield a cleaned-up view of the world, and it can be fun because it lets you view scenes from vantage points that you don't normally see. But just getting up on a rooftop and shooting down doesn't guarantee good photos; you still need to have something interesting going on in the scene below.
- With aerial photography, the ground, floor, or grass becomes your background. That often makes for good shooting, again, because it's usually not cluttered or messy.
- One good spot for getting aerials on the cheap is the roof of a tall commercial building. Of course, you still need interesting subject matter. You're probably not interested in just shooting other rooftops, but it might be a good location for shooting a parade on the street below or capturing car lights in the early evening. You might also get a good view of city landmarks from such a vantage point.



Look for interesting patterns or unusual subjects to photograph from above.

- A small programmable drone is another way to get aerial shots. Check the restrictions regarding how high these can fly in your area. If drones aren't really your passion, hire someone who has one to operate it for you. That way, you can concentrate on your framing rather than flying the drone.
- If you get the chance to shoot from an airplane, make sure it's a style of plane where the wings are above the aircraft, not below it; otherwise, all you will see is wing when you go to shoot. Before you take off, ask the pilot whether you can open the windows or take off the door. Keep an eye on the strut in a fixed-wing aircraft; you need to shoot either behind it or in front of it. Note that if you're shooting in front of the strut, you will catch the propeller if you're not careful. Also tell the pilot that you want to stay low and slow if possible; use a wide-angle lens to show the extent of the land.

- Even better than working from an airplane is shooting from a helicopter, but both options are pricey. Airplane rentals can cost \$500 or more per hour, while helicopter rentals can easily exceed \$1,000 per hour.
- Somewhere between a drone and a helicopter is a utility truck or cherry-picker. These make stable platforms and can take you from 40 to 100 feet or more in the air. You might be able to make a deal with a local arborist or builder for a chance to shoot from one of these trucks.
- Depending on your subject, you may also be able to get interesting aerial shots just by looking down from your standing height, using a wide-angle lens, and not giving your viewers much frame of reference. Scenes or subjects that have geometric or graphic patterns work well with this technique.

Positioning yourself in a choir loft can result in an out-of-the-ordinary wedding photograph.



- Other locations for getting aerial shots include staircases, office or hotel windows, church balconies, the grandstands at a sports arena, the deck off the back of your house, and hilltops. Keep an eye on your local newspaper for community events that may lend themselves to aerial treatment, such as parades.

### **Assignment**

See how creative you can be in finding spots for cheap aerial photography; look for bridges or elevated walkways, lighthouses or lookout towers, or the observation deck at an airport. As you look down, notice how ground-level elements, such as the grass or pavement, become your backdrop, giving you a different view of the world. Keep in mind that even from this perspective, you still need to capture interesting subjects.

## Smartphone Photography

**A**s of 2015, about two-thirds of all Americans carried smartphones; that means that more than 200 million people in the United States alone carry a camera everywhere they go. And as smartphones get even smarter, they are becoming the go-to camera for many. Smartphones don't have the same capabilities as high-end equipment, but they are quite versatile and give you the ability to experiment easily with panoramic shots, a wide range of filters, and even video. In this lesson, we'll explore just how far you can get using only the smartphone in your pocket.



Smartphones work best in strong light and are excellent for capturing graphic detail.



A number of specialty lenses—such as macro, zoom, and fisheye— as well as tripods and cable releases are available for most smartphones.

### Lesson Takeaways

- The capabilities of a smartphone are not as good as those of a high-end DSLR, but as we all know, the best camera you have is the one you have with you. You don't always want to lug your camera and lenses around with you, but you almost always have your smartphone, and you shouldn't hesitate to use it when you're out and about in daily life.
- Many smartphones don't have the capability to take good photos at night, so go where the light is. Some smartphones, however, allow you to control ISO and exposure compensation, which may help in low-light situations.
- Remember that direct flash on a camera ruins many pictures; disable the flash on your smartphone and work with the available light when you can.
- Most smartphones have a panorama setting. Try using this technique in both big landscapes and urban settings. You can also have fun

with allowing your subjects to appear multiple times in a panorama. The trick here is to move the smartphone slowly, holding it steady and level; then, make sure you keep the camera on the subject long enough before he or she moves to a different part of the shot.

- Of course, when we think of smartphone cameras, we think of selfies. Remember, smartphones have front and back cameras; use the front camera to take pictures of yourself in front of landmarks.
- A number of accessories are available to help you take better or more interesting smartphone photographs, including small tripods and various lenses, such as macro, telephoto, wide-angle, and fisheye.
- Experiment with various filters that are available for smartphones, including those for black and white, sepia tones, and pastels. Hundreds of these downloadable filter apps are available, including some that make your photos look shiny and futuristic or like glass-plate negatives with scratches, old home movies, or tintypes.
- The video capability on smartphones is amazing. Most phones shoot video in both real time and slow motion.

Once you've mastered panorama photography, try playing tricks in your panorama photos.







Smartphones are everywhere, which means that cameras are everywhere, but not every moment should be photographed. Think before you snap.



- It's essential to transfer your smartphone pictures and videos to another media storage device, such as a laptop or an external hard drive. Otherwise, you risk losing all your photos if you drop your phone in a puddle or leave it at the bus stop.
- Smartphones make it easy to take unflattering or embarrassing pictures and post them on the Internet for the world to see, but we should always respect the privacy of others. Also keep in mind that some difficult situations are just not meant to be photographed. Think carefully before you photograph and share sad or intimate moments.

### **Assignment**

Choose a shoot to do entirely with your smartphone, perhaps simply walking around your city or hiking through the woods on a weekend afternoon. Before you go on location, research and download some filter apps that may give you some interesting effects. Once you're on site, experiment with the apps, as well as your phone's panoramic and video capabilities.

## The Decisive Moment in Photography

**H**enri Cartier-Bresson called attention to the “decisive moment” in photography in the 1950s. For Cartier-Bresson, this was a fleeting image—a scene that took place in a fraction of a second—combined with great composition. Capturing such a moment in a picture is the highest achievement of photography. In this lesson, we’ll look at some attempts to catch decisive moments and learn some tips that might help you reach this pinnacle yourself.

### Lesson Takeaways

- Not surprisingly, decisive moments can be difficult to capture. We are, after all, looking for a moment that occurs in just a fraction

Still photography captures fleeting moments in time that the human eye may miss.





Capturing decisive moments takes a combination of skill, patience, anticipation, and luck.

of a second yet tells an interesting story in beautiful light and with great composition. However, it's also true that decisive moments occur in literally every action we take and every situation in which we find ourselves. We might even stretch the definition of a decisive moment to be any moment in time that you like and think won't come again.

You really want to try to get to the essence of the situation—the high point—but you want to do it in such an artful way that the picture becomes iconic and lives on.

- Decisive moments often occur at sporting events—the game-winning catch or play at home base. To keep the background clean, try to get above the action and shoot downward. Dramatic or severe weather, such as a thunderstorm, also lends itself to shots of decisive moments.

Setting up repeated-action scenarios and using continuous motor drive shutter helps you capture decisive moments.



- Look for repetitive action, such as children bouncing on a trampoline or playing in a pile of leaves; such situations provide multiple opportunities to practice your ability to capture decisive moments. As you shoot such scenes, you'll learn how to use the motor drive and establish your shutter speed so that you're ready for decisive moments when you're out in the world and the situation is truly fleeting.
- In practice situations, work out the framing ahead of time and set your camera up on a tripod. That way, you don't have to think about framing as you shoot. Decide in advance what you want to show in your shot, such as children on a trampoline isolated against the sky or a horse in mid-stride on a racecourse. In situations with a great deal of activity and the potential for many decisive moments,

ask yourself: What is the best picture here? Where will the decisive moment take place?

- Work on cultivating your ability to anticipate good moments. Again, go to a sporting event and pay attention to the action. If the bases are loaded, you know that the player on third will try to slide into home. Position yourself where that moment will happen.

### **Assignment**

Decisive moments can be found in almost any situation, from everyday family interactions to exciting plays in sports to events that make the news around the world. There isn't any one approach to capturing decisive moments beyond constantly working at your craft. Keep a camera handy at all times, practice and experiment with all the tools in your photographer's toolbox, and develop your eye by critiquing your photos after a shoot. With those tips in mind, brainstorm some unusual activities you might photograph that involve repetitive action. What about a carnival or a swim meet? Spend some time observing activities and see if you can train yourself to predict when the next decisive moment will occur.

## Live Event Photography: Farmers' Market

Just about every city in America throughout the summer has a farmers' market that photographers love to shoot. These events offer a great deal of visual excitement—with the crowds and the brightly colored produce for sale—but they can also be difficult to photograph, especially if you want to get more than just tight shots of your favorite vegetables. In this lesson, we'll walk through a typical farmers' market, paying particular attention to how we can deal with the light as it changes throughout the day.

### Lesson Takeaways

- If you want to have a pleasant experience photographing a farmers' market, travel light: At most, you need a shooting vest to hold extra batteries, a flash, a small soft box, extra lenses, and extra camera cards.

Light at a farmers' market in full swing can be harsh. The earlier you arrive, the softer and more subtle the light will be.



Leave additional cameras and your tripod at home or out of sight in your locked car so you have a backup close by.

- A farmers' market is visually chaotic. To orient yourself, walk around the market and look for the best subjects in the best light. Taking the time to scout a scene pays off in terms of interesting images.
- If possible, establish a home base for yourself, either with one of the vendors or in a central location that you think will yield good photographs. Don't overlook nearby fire escapes or other high points that might allow you to get free aerial shots. You might miss

Don't be a photo sniper. Talk to the people you wish to photograph, explain what you're doing, and be genuinely interested in what they're doing. They'll be more cooperative, and you'll get better results.







Running the apertures on a single scene is a useful exercise in layering.



At any crowded event, look for a safe, accessible place to take an aerial shot.

some pictures by staying in one place, but you also should avoid trying to cover too much, which can yield mediocre results.

- As we've said, the keys to good pictures are patience, time, and access. Once you find a good location, stick with it for a while—at least 10 minutes or more. Watch for repeated action that you can anticipate and let the scene build to a natural climax.
- A farmers' market can present a difficult light situation. If it's in a city, you may find yourself in a deep canyon of buildings; the walls may be in full light, while the floor of the "canyon" remains dark. You can beat that situation by breaking out a flash and a soft box or just by walking around to find better light. You might also try using the surrounding buildings as giant reflectors, watching where they are bouncing the light with splendid effect.

- Try this experiment: Set your camera on aperture priority, dialed down one stop with the exposure compensation dial, and run the apertures. Watch the differences you get in depth and layering. If you want to control the light in a precise way, you can put your camera in manual mode; in most other situations, use aperture priority for quickly changing situations.
- Experiment with shooting an out-of-focus foreground, a classic technique that many photographers use to add depth to their photographs. Open the aperture wide, choose a target, and focus on it exclusively. This technique often allows you to get to the point of your image quicker than if you try to show everything.



A camera equipped with auto focal plane/high-speed sync flash and a soft box can darken a harshly lit background and bring beautiful light to your subject.

- In a farmers' market or other public venue, remember to tell potential subjects what you're doing and offer to share your photographs with them. Those people who agree to be photographed become your partners, even if only for a few minutes. Because they have a vested interest in making your picture work, they'll often go to great lengths to help you.
- When the light starts to become harsh, underexpose the scene, making it richer and more saturated. This may also be the time to use a reflector and get some detail shots. If you want to capture the larger scene, use a soft box and a flash, but keep the flash off the camera, firing it either with a cord or wirelessly. Before you use the flash, expose for the brightest part of the frame, then dial that down a little bit so that the background is the darkest part of the image you'll be creating. Then, play around with the flash, increasing and decreasing the power until you get the look you want.
- If you have a more advanced camera, you may have what's called *auto focal plane*, which means that the camera will allow you to shoot with a flash at faster than 1/250 or 1/320 of a second, the standard maximum flash speeds for most cameras. This allows you to darken the background and retain a fairly wide aperture, giving you shallow depth of field even in harsh lighting conditions.

### Assignment

Visit a farmer's market, flea market, or craft fair in your town. Walk around the market and find a spot where you can watch as the action ebbs and flows. After you have a feel for the scene, try some of the techniques suggested in the lesson, such as running the apertures, shooting an out-of-focus foreground, or using a soft box and flash. Approach some friendly looking vendors or customers and ask if you can take their portraits. Finally, if you offer copies of the photographs, make sure you deliver them.

## Live Event Photography: T-Ball

The epitome of action photography is the sporting event, but we often associate photographing such events with expensive equipment and experienced professionals. However, you can easily practice action photography at a children's T-ball or Little League game. In this lesson, we'll talk about using motor drives, fast shutter speeds, and autofocus, and we'll explore the idea of storytelling with photographs. As with any other subject, taking action shots involves being thoughtful about the scene in front of you.



At any event, it's good to begin with an establishing shot.

## Lesson Takeaways

- When we think about action photography, sporting events often come to mind. Even in such settings, we still want to tell a story, one with a beginning, a middle, and an end. Shoot the baseball diamond or the gym before the game begins. Photograph the players and the spectators, followed by the celebration after the game. Look for all the elements that contribute to an interesting narrative.
- To begin a story in photographs, start with an establishing shot, usually one that's wide, with you positioned above the action. Try to capture a sense of place in one view.
- Keep in mind that a telephoto lens restricts your view. By nature, it zooms in and reduces how much of the world you're seeing. In

Everything you shoot should be held to the same high standards. Even if you don't particularly care about the subject, it should still be good. This is the mark of a true professional.

Find your subject and use single-point autofocus to keep that subject sharp throughout the action.





Don't forget to "shoot the edges" of a sporting event and capture the emotion of the crowd.

many situations, a medium-length lens enables you to layer your images and shape your frames, giving more of a sense of place.

- Emotions tend to run high in sports. At some point during the game, turn your attention away from the field and focus on the spectators. Look for fans cheering and laughing or players who are dejected after losing the big game. These reactions are part of the story you're telling. Try to get some detail shots, too, such as a close-up of player's cleats or a scene with a coach talking to a child.
- Particularly with children's sporting events, you may be able to get very close to the action. Ask ahead of time if you can shoot from a sideline position on the field or court. At a baseball game, find out if you can set up a ladder against the backstop.



Burst mode is your smartphone's equivalent of motor drive.



- Most photographers know to use a fast shutter speed for action photography. With a long lens, a fast shutter and a wide-open aperture help you freeze the moment with little depth of field. You should also use autofocus and set your camera on motor drive to increase your odds of being in focus at the right time.
- At times, autofocus may have a hard time picking out one thing in a crowd. Let's say you're photographing a football player running the ball toward you in a mass of other players. To handle this situation, you can either set the autofocus so that the object that's closest to the camera will always be in focus, or you can put a single-point autofocus on the player you're interested in to keep that player sharp most of the time.
- At a sporting event, you can also prefocus your camera on a specific spot, such as along a baseline, and use your motor drive to capture players as they run past. Try this from various perspectives—slightly above the action and slightly below. You can also experiment with using the burst mode on a smartphone to fire off shots in quick succession.

### **Assignment**

Find a community ball field or recreation center where you can photograph sporting events. Approach the event with the aim of telling a complete story. Get some establishing shots, as well as some action and detail shots. Practice freezing the action with autofocus by using a fast shutter speed and motor drive. Don't forget to include the spectators or other subjects that surround the main event.

## Live Event Photography: House Party

If you're the designated photographer for your family, you may often be asked to shoot social events and get-togethers. Sometimes, that can be hectic if you're trying to both enjoy yourself and cover the event. In these situations, don't burden yourself with a lot of equipment; in fact, you may find that a smartphone works just fine. The benefit of acting as the family photographer is that you'll have a record of meaningful personal events and of important people in your life. You may not get a dramatic visual payoff, but you'll have delightful memories to enjoy for many years into the future.

### Lesson Takeaways

- Arrive early for any event you're asked to photograph. Often, you can get shots of the preparations that are just as good as those of the event itself, in part because you aren't feeling any pressure.

If you get the chance, photograph the party set-up and clean-up.





Overexposing the frame can create a soft background for your main subject.

- Before you photograph a party, go through the venue and think about where the guests will gather and what the backgrounds and the light are like. Look for places where you might get an overview of the crowd, such as a staircase. Remember that it's often difficult to get a feel for how big the party is from ground level, and it can be next to impossible to find a clean background. Also look for out-of-the-way places where people will gather and that have good lighting.
- If you're hunting for candid, try to melt into the background. You want to avoid having people engage with the camera. If you work around the edges long enough, people will start to ignore your presence and relax.
- In addition to crowd shots, look for moments that occur among just a few partygoers—perhaps old friends reconnecting or parents interacting with their children.



At many parties, the food is the star of the show. At a barbeque, choose a dark background and expose for the highlights to show off the smoke and flame.

- Many photographers avoid overexposing anything except, perhaps, highlights on objects. In some cases, however, a perfectly blown-out, white background eliminates clutter and allows your subjects to pop. Think about photographs you've seen of a model on a hill on a cloudy day; with everything blown out white, the model stands out. Overexposing can be an interesting way of eliminating distracting backgrounds.
- One of the keys to photographing events is to be patient and allow the action to unfold. Watch people coming and going; notice the colors people are wearing and the different activities in which they're involved. Keep moving around the party and reassessing the scene as it changes.
- Scenes that are evenly lit can often be handled with a smartphone. In general, if you have a scene that's coming together naturally and

you don't need to do anything too radical in terms of extreme low light, the smartphone could be the way to go.

- At a cookout, try shooting through the smoke of the grill. Smoke diffuses the light and adds drama to almost any shot. Keep in mind, though, that you can't see smoke against a bright white sky; you need a dark background. The same is true of rain and snowflakes.

### Assignment

Volunteer to photograph a friend's party or a neighborhood cookout. Aim to get a variety of shots: of the party preparations and decorations, the crowd, and individual guests. Keep moving as the party progresses, and make sure to stay on the sidelines so that guests will eventually ignore your presence and give you those great candid moments.

Parties are a great opportunity to take environmental portraits of friends and loved ones.



## Live Event Photography: A Day at the Ranch

**S**hooting a fast-paced scene on location requires you to use all your problem-solving tools. You're looking for the single frame that captures all the drama, action, and color of the scene. In this lesson, we'll tag along on cattle-branding day at a ranch to see how we can work with fast-moving action and visual chaos.

### Lesson Takeaways

- One important thought to keep in mind when you're out shooting on location is this: Not everything happens when the light is good. Photographers need to learn to work around this unfortunate fact.

Detail shots can set the context for your story.



Try photographing the same location or object at different times of year.



When photographing active or dangerous situations, stay out of your subjects' way and use layering to fill your frame.



- It's fun to shoot the same scene at different times of the year, especially landscapes. Look for a tree or an empty road that you can return to in spring, summer, fall, and winter. If you can, insert something interesting or unusual in the scene, such as a pair of boots.
- In a chaotic scene, such as branding day on a ranch, it's important for you to bring along every tool in your mental toolbox. It may seem paradoxical, but it can be quite challenging to find pictures that resonate in a scene that's filled with color, action, and excitement. Your job is to distill all the drama down to a single still image.





Use lenses with different focal lengths to capture different landscape views.



Whether your subjects are adults or children, talk to them, ask questions, and show interest to put them at ease and bring out their personalities.

- Again, look for repetitive action that you can anticipate. Remember that you can't always get the best shot right away. You need to be observant and patient as you work the scene. As an exercise

to develop this ability, set your camera and tripod up in a busy location, such as city sidewalk or a market scene, and watch the action ebb and flow.

- In a scene filled with action, every now and again, look off to the side and photograph some of the spectators and surroundings. Also remember to get some establishing shots, positioning yourself above the action if possible.
- As we've said, photographers are always looking for opportunities to create layered pictures. It's not enough to photograph just one man on a horse; you want another man on a horse in the background or branding taking place in the foreground. Keep your eyes open for framing devices in the scene and try to fill every part of your shot.
- These days, it's common for people to consider fixing photographs on the computer after a shoot, but it's much better if you can get a good shot in the first place.

### **Portrait Tips**

- When the live-action event is over, it's time to take some portraits. Find a shaded area for your subjects and bounce some sunlight into it with a reflector. Use a wide-open aperture to keep the eyes sharp and the background soft.
- If your subjects are right up against a background, such as a wall, it's harder to throw the backdrop out of focus, even with a wide aperture. Try moving the subject away from the background.
- Particularly when you're photographing children, keep talking to your subjects to make them comfortable and prevent fidgeting. Also, even though most photographs of children are shot from above, it's important to get down on the eye level of children or even lower.

**Assignment**

Identify an activity or situation that encompasses some of the fast-paced action discussed in this lesson, perhaps a community race for charity or rush hour in the downtown area of your city. Find a spot where you can observe the activity and concentrate on shooting repetitive action that you can anticipate. Remember that the goal here is to distill the visual chaos into a single shot that tells a story.

## Live Event Photography: Family Fishing Night

**A**ny event can be an opportunity for storytelling in photos. In this lesson, we'll make a story in pictures of a family fishing trip and cook-out. As the evening progresses, we'll look for establishing shots, detail shots, and human interactions, as well as interesting light effects produced by sparklers and firelight.

### Lesson Takeaways

- A great way to begin a story is to get an establishing shot of some kind. If possible, get above the scene and shoot with a wide lens to give viewers an overview of the location.

Use water as a dark background for bright, reflective objects.





Late-evening light makes shooting easier. It is soft and flattering from almost any direction.

- Also try for some detail shots. For example, on a fishing trip, make a still life of a tackle box or get a close-up of a lure. Of course, you'll also want to capture human moments in your story—funny, interesting, or tender scenes.
- In storytelling, you still need to pay attention to the backgrounds and the light. If you're outdoors in the evening and you find the shadows too harsh, wait for the sun to slip over the horizon. At that time of day, everything is evenly lit, and the results will be lovely. Your most memorable frames are often made when the light is very subtle.
- If you're shooting a landscape or a wide scene, make sure your subject stands out against the background. If it does, the shot will work, even if the subject is far back in the scene.

- Look for opportunities to include some portraits in your story. The key here is a clean background; if you're outdoors, for example, shoot against a sea of grass.
- Remember to try setting your camera to aperture priority and underexposing your shots. Don't be afraid to work with the shadows or try a shot that is completely backlit.
- Once the sun goes down, walk around the outskirts of the scene and look for human interactions. When it gets really dark, try for just one more shot. These “Hail Mary” images, made just when you think you can't make pictures anymore, are often a pleasant surprise.

I'm never truly on top of it. I've never truly mastered it. I'm always critical. I always think it could be done better, and I think, maybe, so should you. The moment we quit thinking that we could improve, we're done.

Look for found still-life opportunities.



- When you're critiquing your photographs, you'll generally think of different approaches you might have tried to get better results. That just gives you an excuse to go out and try again.

### Assignment

Photograph a family outing as if you're a photojournalist, looking for opportunities to tell the story of the outing in pictures. Shoot in the very last light of day, when you think it's far too dark to pull off a single frame. In other words, push yourself.



After sunset, try photographing a moving light source at a slow shutter speed.



## Editing, Culling, and Critiquing Your Photos

**F**or some people, editing may mean doing a great deal of post-production work on the computer, adjusting the color, lighting, and so on in their images. In this lesson, however, editing means simply selecting the right picture after you've done your best at shooting in the field. Once you sit down at the computer to critique your images, how do you cull them down to just a few that capture the story you want to convey?

### Lesson Takeaways

- Often, it's good to have help editing. Find a trusted friend or mentor who can tell you what he or she sees in your photographs that you don't. You don't have to take the advice of someone else, but it can be helpful to have an outside opinion. Show your friend just a handful of photographs after you've done a pre-edit.

Sometimes, the best photo in a series is the emotional decisive moment, even if it is not the technically superior frame.





Little details make a big difference. In the first photo, the couple's bodies are merged and do not immediately read as two human figures; in the second, two distinct figures—one male, one female—are visible, which makes the situation immediately clear.

- One approach to editing is to go through an entire shoot at once. Use your photo-organizing program to tag or mark the pictures that stand out and eliminate those that don't work for you. Then, do a second pass, looking for those pictures that could be real contenders for the final few images you take away from the shoot. Take a break before you do a third pass so that you can see your selected images with fresh eyes.
- As you go through your shots, think back to all you know about good photography. Ask yourself: Is the background clean? Is the horizon line straight or tilted? Does the image give you a sense of place? Is the light soft and even? Are the subjects sharp and in focus? Does one image give you a more interesting angle or a livelier moment than another?
- Remember, everything in your frame should be there because you want it to be, not because you weren't patient enough or couldn't figure out a way to solve the problem. Keep in mind, too, that in some sets of images, you won't find a clear winner; you may have to go back out and do the shoot again. Even professional photographers can take rookie snapshots if they don't concentrate on solving visual problems and developing their craft.

### **Assignment**

Choose a recent shoot you've done for a thorough critique and editing session. Do a first pass through the photos to eliminate the shots that obviously don't work, trying to pinpoint the problems you see as you go. For example: Is the subject not sharp or clear enough? Is the subject too far away? Is there something in the frame that you didn't intend to be there? Next, do a second pass to find those shots you think might be "keepers." After you narrow down your selections, share the shots with a friend to find out what he or she sees in the photos.



If your edit doesn't show you a clear winning frame, bring in others to help you decide.

## Bibliography

All *National Geographic* magazine articles cited here are viewable online.

Titles with an asterisk are no longer in print but can be found through used-book vendors. They're worth the hunt.

Abell, Sam, and Robert E. Gilka. *Stay This Moment: The Photographs of Sam Abell*. New York: Legacy Words, 1990.

\*Allard, William Albert. *Vanishing Breed: Photographs of the Cowboy and the West*. New York: Bulfinch Press, 1984.

———. *Portraits of America*. Washington, DC: National Geographic Insight, 2001.

———. *William Albert Allard: Five Decades*. Washington, DC: National Geographic/Focal Point, 2010.

Arbus, Diane. *Revelations*. New York: Random House, 2003.

Audubon, John James. *The Birds of America*. New York: Sterling Publishing, 2011. (Multiple editions and sizes of this source are available.)

Balog, James. *Survivors: A New Vision of Endangered Wildlife*. New York: Harry N. Abrams, 1990.

Bendavid-Val, Leah, ed. *National Geographic: The Photographs*. Washington, DC: National Geographic, 2008.

———, ed. *Through the Lens: National Geographic Greatest Photographs*. Washington, DC: National Geographic, 2009.

———, Michelle Anne Delaney, and Maura Mulvihill. *National Geographic Image Collection*. Washington, DC: Focal Point, 2009.

\*Brandenburg, Jim. *Chased by the Light*. Chanhassen, MN: Northword Press, 1998.

Brandt, Nick. *A Shadow Falls*. New York: Abrams, 2009.

Burtynsky, Edward. *Manufactured Landscapes: The Photographs of Edward Burtynsky*. New Haven, CT: Yale University Press, 2003.

*Communication Arts*. Any of the photo or design annuals show excellent examples of visual communication and problem solving.

Cook, Diane, and Len Jenschel, photographers. "New York's High Line." *National Geographic*, April 2011.

Crewdson, Gregory. *Twilight*. New York: Harry N. Abrams, 2002.

Forsberg, Michael. *Great Plains: America's Lingering Wild*. Chicago: University of Chicago Press, 2009.

Holm, Michael, ed. *Richard Avedon: Photographs, 1946–2004*. Humlebaek, Denmark: Louisiana Museum of Modern Art, 2007.

Iooss, Walter. *Athlete*. New York: Sports Illustrated, 2008.

Laman, Tim, and Edwin Scholes. *Birds of Paradise: Revealing the World's Most Extraordinary Birds*. Washington, DC: National Geographic/Cornell Lab of Ornithology, 2012.

Lanker, Brian. *I Dream a World: Portraits of Black Women Who Changed America*. New York: Stewart, Tabori & Chang, 1989.

\*Leibovitz, Annie. *Photographs, 1970–1990*. New York: Harper Collins, 1991.

*LIFE 75 Years: The Very Best of LIFE*. New York: Life, 2011.

Lubben, Kristen, ed. *Magnum Contact Sheets*. London: Thames & Hudson, 2011.

Maisel, Jay. *Jay Maisel's New York*. Buffalo, NY: Firefly Books, 2000 (or anything else of Maisel's you can lay your eyes on).

\*Marshall, Jim. *Not Fade Away: The Rock and Roll Photography of Jim Marshall*. New York: Bulfinch, 1997.

McNally, Joe. *The Hot Shoe Diaries: Big Light from Small Flashes*. Berkeley, CA: New Riders Press, 2009.

Meyerowitz, Joel. *Cape Light: Color Photographs by Joel Meyerowitz*. New York: Bulfinch, 1979.

\*Mitchell, John G., ed. *National Geographic: The Wildlife Photographs*. Washington, DC: National Geographic, 2001.

Morrell, Abelardo. *Camera Obscura*. New York: Bulfinch, 2004.

Musi, Vincent, photographer. "Taming the Wild." *National Geographic*, March 2011.

Naskrecki, Piotr. *The Smaller Majority*. Cambridge: Belknap Press of Harvard University Press, 2007.

National Geographic Society. *In Focus: National Geographic Greatest Portraits*. Washington, DC: National Geographic, 2004.

Peterson, Bryan. *Understanding Close-Up Photography: Creative Close Encounters with or without a Macro Lens*. New York: Amphoto Books, 2009.

———. *Understanding Exposure: How to Shoot Great Photographs with a Film or Digital Camera*. 3<sup>rd</sup> ed. New York: Amphoto Books, 2010.

Richardson, Jim, photographer. "Our Vanishing Night." *National Geographic*, November 2008.

Rowell, Galen. *Galen Rowell's Inner Game of Outdoor Photography*. New York: W. W. Norton & Company, 2010.

Salgado, Sebastião. *Workers: An Archaeology of the Industrial Age*. New York: Aperture, 2005.

Sartore, Joel. *At Close Range with National Geographic*. Directed by Olive Bucklin. DVD. Walton, KY: PBS Home Video, 2006.

———. *Nebraska: Under a Big Red Sky*. Lincoln, NE: University of Nebraska Press, 2006.

———. *Photo Ark*. Washington, DC: National Geographic, 2015.

———. *Rare: Portraits of America's Endangered Species*. Washington, DC: Focal Point (National Geographic), 2010.

———, photographer. "Top Ten State Fair Joys." *National Geographic*, July 2009.

———, with John Healey. *Photographing Your Family: And All the Kids and Friends and Animals Who Wander through Too*. Washington, DC: National Geographic, 2008.

\*Seliger, Mark. *Physiognomy: The Mark Seliger Photographs*. New York: Bulfinch, 1999.

Skerry, Brian. *Ocean Soul*. Washington, DC: National Geographic/Conservation International, 2011.

Sontag, Susan. *On Photography*. New York: Picador, 2001.

\*Stout, Dr. Bob, and Nancy McMillen, eds. *The Pictures of Texas Monthly: 25 Years*. New York: Stewart, Tabori & Chang, 1998.

\*Vesilind, Priit. *National Geographic: On Assignment USA*. Washington, DC: National Geographic, 1997.



Wilson, Laura. *Avedon at Work: In the American West*. Austin, TX: University of Texas Press, 2003.